

REMARKS

Applicants have amended claims 6 and 7 to recite explicitly limitations that are inherent in the language of original claims 6 and 7 as explained in the response filed May 24, 2005. No new matter has been added, and no new issues have been raised. Applicants respectfully request entry of this amendment.

Claims 6-11 have been rejected under 35 USC 103(a) as unpatentable over U.S. Patent No. 5,397,909 (Moslehi) in view of U. S. Patent No. 5,882,994 (Araki). Applicants respectfully traverse this rejection.

Claim 6 recites forming a field oxidation film and a second gate oxide film through selective oxidation by using the oxidation protection film as a mask. The Examiner contends that Moslehi's interim gate etch-stop layer 52 corresponds to the claimed oxidation protection film and Moslehi's field insulating region 42 to the claimed field oxidation film.

In the response filed May 24, 2005, applicants explained that Moslehi does not disclose the oxidation protection film used in the claimed method as follows:

In Moslehi's manufacturing method, the field insulating region 42, which the Examiner equates to the claimed field oxidation film, is first formed at the step shown in FIG. 2 of Moslehi. Then, the etch-stop layer 52, which the Examiner equates to the claimed oxidation protection film, is formed at the step shown in FIG. 3 of Moslehi. Thus, Moslehi's etch-stop layer 52 cannot be used as a mask for forming the field insulating region 42 as claimed because the field insulating region 42 has been already formed when the etch-stop layer 52 is formed. (Emphasis added)

In response to this argument, the Examiner contends that Araki's ONO layer cures this deficiency of Moslehi. See page 6 of the Action. However, Araki's disclosure about the formation of the ONO layer includes no oxidation protection film used as a mask to form the ONO film. In fact, no part of Araki discloses the claimed use of the oxidation protection film as a mask.

On the requirements for a *prima facie* case of obviousness, MPEP 2143.03 explains, "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught

or suggested by the prior art. ... All words in a claim must be considered in judging the patentability of that claim against the prior art.” Claim 6 states that the oxidation protection film is used as a mask to form the field oxidation film and the second gate oxide film. Neither Moslehi nor Araki discloses the claimed oxidation protection film, as explained above. Thus, the Examiner has failed to carry his burden to establish *prima facie* obviousness of the claimed invention by finding all the claim limitations in the prior art.

If the Examiner is taking the position that persons of ordinary skill in the art would have been motivated to combine the teachings of Moslehi and Araki, which together do not teach or suggest the claimed oxidation protection film used as a mask, to produce the claimed invention, the Examiner failed to explain his reasoning and thus failed to carry his burden, as required by *In re Lee*, 277 F.3d 1338, 1343-44, 61 USPQ2d 1430, 1439, 1442 (Fed. Cir. 2002):

When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. ... This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. ... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency’s conclusion.

Furthermore, claim 6 states that the oxidation protection film is formed on the first silicon layer, the field oxidation film and the second gate oxide film are formed using the oxidation protection film as a mask, and the second silicon layer is formed to cover the field oxidation film and the second gate oxide film. Applicants have already explained that the claim language means that the first silicon layer, the field oxidation and second gate oxide films and the second silicon layer are formed in this order and that Moslehi and Araki together do not teach or suggest the claimed order of forming the first silicon layer, the field oxidation and second gate oxide films and the second silicon layer.

The Examiner contends that the claimed order is not recited in the claims. Applicants respectfully disagree with the Examiner. However, to expedite the prosecution of this application, applicants have amended claim 6 to state that the formation of the field oxidation film and the second gate oxide film is performed after the formation of the first silicon layer, and the formation of the second silicon layer is performed after the formation of the field oxidation film and the second gate oxide film. This amendment does not change claim scope because it merely recites a sequence that was inherent in the language of the original claim.

Applicants have explained that the claimed order of the film and layer formation improves the flatness of an interlayer oxide film on which wiring is formed. In response, the Examiner contends that applicants did not show the improved flatness. However, the specification states at page 8, line 33 - page 9, line 5 as flows:

Therefore, the height gap h2 between the gate electrode 10 and the N+ type source layer 11 and the height gap h2 between the gate electrode 10 and the N+ type drain layer 12 becomes smaller compared to those of prior art, leading to the improved flatness of the interlayer oxide film 13. That is, as shown in Fig. 4, the height gap H2 of the interlayer oxide film is smaller than the height H1 of the prior art.

This passage of the specification clearly shows the improved flatness of the interlayer oxide film formed on the structure manufactured by the claimed method.

Claim 7 recites the oxidation protection film used as the mask and the order of the film and layer formation in a manner substantially the same as claim 6.

The rejection of claims 6-11 under 35 USC 103(a) over Moslehi and Araki should be withdrawn because Moslehi and Araki together do not teach or suggest the claimed invention as a whole.

In the event that the transmittal letter is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief is required, applicants petition

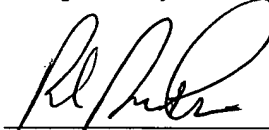
for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to

Deposit Account No. 03-1952, referencing Docket No. **492322001810**.

Respectfully submitted,

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